

CLAIM AMENDMENTS

1 1. (currently amended) A method for performing, for the
2 benefit of a reference provider having a set of users, connectivity
3 evaluations over a data communication network with respect to at
4 least one provider of interest the method comprising the steps of:
5 selecting a plurality of autonomous systems adapted to
6 form a traffic source or a traffic destination for users of said
7 reference provider through the reference provider,
8 supplying tables of Border Gateway Protocol type
9 containing information on paths available on said data
10 communication network for routing said traffic with regard to the
11 autonomous systems of said plurality of systems,
12 extracting from said tables the paths of Border Gateway
13 Protocol type ~~inherent to~~ associated with said at least one
14 provider of interest, by searching the paths that contain the
15 respective number of autonomous system for said at least one
16 provider of interest,
17 extracting for each autonomous system of said plurality
18 of systems, oriented subpaths between each of said autonomous
19 systems and said at least one provider of interest, by identifying
20 for each subpath a respective length in number of hops,
21 identifying for each autonomous system of said plurality
22 of systems a forward traffic volume ~~[[and]]~~ or a backward traffic
23 volume with regard to the users of said reference provider,

24 determining, for each of said subpaths connectivity
25 contribution as a function of the respective length in number of
26 hops and of the forward traffic volume or the backward traffic
27 volume,

28 determining for each autonomous system of said plurality
29 of systems total connectivity values accumulating the connectivity
30 contributions determined for the oriented subpaths extracted for
31 each of said autonomous systems, and

32 accumulating the total connectivity values determined for
33 the autonomous systems of said plurality of systems, so as to
34 obtain total connectivity values relating to said at least one
35 provider of interest.

1 2. (previously presented) The method according to claim
2 1 wherein the steps are carried out for a plurality of providers of
3 interest present on said data communication network.

1 3. (previously presented) The method as recited in
2 claim 2, further comprising the step of:

3 sorting the total connectivity values obtained for the
4 providers of interest of said plurality of systems in at least one
5 sorted list.

1 4. (previously presented) The method as recited in
2 claim 1, further comprising the steps of:

3 identifying for each autonomous system of said plurality
4 of systems both the forward traffic volume and the backward traffic
5 volume with regard to the users of said reference provider, and
6 determining for each of said subpaths respective
7 contributions of connectivity as a function of the respective
8 length in number of hops and of both said volumes of forward
9 traffic and backward traffic.

1 5. (previously presented) The method as recited in
2 claim 4 further comprising the step of:

3 generating values of total connectivity for said at least
4 one provider of interest disaggregated into values of total
5 connectivity for forward traffic and backward traffic.

1 6. (previously presented) The method as recited in
2 claim 1 further comprising the step of

3 submitting said tables of Border Gateway Protocol type to
4 a clean-up operation to eliminate comments contained in said
5 tables.

7. (canceled)

1 8. (previously presented) The method as recited in
2 claim 2, further comprising the step of:

3 selectively reallocating transit traffic through said
4 reference provider on at least one part of said providers of
5 interest of said plurality of systems.

1 9. (currently amended) A system for performing for the
2 benefit of a reference provider having a set of users connectivity
3 evaluations on a data communication network with respect to at
4 least one provider of interest, the system comprising:

5 tables of Border Gateway Protocol type containing
6 information on paths available on said data communication network
7 for routing traffic with regard to a plurality of autonomous
8 systems adapted to establish at least ~~one path between~~ a source
9 [[and]] or a destination [[of]] for traffic [[for]] of users of
10 said reference provider through the reference provider,

11 detection means for detecting, for each autonomous system
12 of said plurality of systems, at least one between a forward
13 traffic volume and a backward traffic volume with regard to the
14 users of said reference provider, and

15 processing means for:

16 extracting from said tables the paths of Border
17 Gateway Protocol type associated with said at
18 least one provider of interest, by searching
19 for the paths that contain the respective
20 number of autonomous system for said at least
21 one provider of interest

22 extracting for each autonomous system of said
23 plurality of systems oriented subpaths between
24 said each autonomous system and said at least
25 one provider of interest, identifying for each
26 subpath a respective length in number of hops,
27 determining for each of said subpaths a connectivity
28 contribution as a function of the respective
29 length in number of hops and of said forward or
30 backward traffic volume with regard to the
31 users of said reference provider,
32 determining for each autonomous system of said
33 plurality of systems total connectivity values
34 accumulating the connectivity contributions
35 determined for the oriented subpaths extracted
36 for each said autonomous system, and
37 accumulating the total connectivity values
38 determined for the autonomous systems of said
39 plurality of systems, so as to obtain values of
40 total connectivity relating to said at least
41 one provider of interest.

1 10. (previously presented) The system as recited in
2 claim 9, configured for performing connectivity evaluations for a
3 plurality of providers of interest present on said data
4 communication network.

1 11. (previously presented) The system as recited in
2 claim 10, further comprising:

3 means for sorting the total connectivity values obtained
4 for the providers of interest of said plurality of systems in at
5 least one sorted list.

1 12. (previously presented) The system as recited in
2 claim 9 wherein:

3 said detection means is configured for detecting for each
4 autonomous system of said plurality of systems, both the forward
5 traffic volume and the backward traffic volume with regard to the
6 users of said reference provider, and

7 said processing means is configured for determining, for
8 each of said subpaths, respective connectivity contributions as a
9 function of the respective length in number of hops and of both
10 said forward traffic volume and backward traffic volume.

1 13. (previously presented) The system as recited in
2 claim 12 wherein said processing means is configured for generating
3 total connectivity values for said at least one ISP of interest,
4 disaggregated into total forward connectivity values and total
5 backward connectivity values.

1 14. (previously presented) The system as recited in
2 claim 9 further comprising:

3 pre-processing means for submitting the tables of Border
4 Gateway Protocol type to a cleanup operation to eliminate comments
5 contained in said tables.

15. (canceled)

1 16. (previously presented) The system as recited in
2 claim 10 wherein the providers of interest of said plurality of
3 systems are equipped with a selective re-balancing module for
4 re-balancing the transit traffic through said reference provider.

17. (canceled)